# CIVIL TECH LABS

Accredited by NABL as per ISO/ IEC 17025 : 2005

# 5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027

Ph: 080 - 4114 2867 / Mob. : 96862 31801, Email: civiltechlabs@gmail.com

T-2654


To,

Assistant Executive Engineer,
Vidyaranyapura Sub Division,
BBMP.

15th March 2016

Dear Sir,

**Sub:** Testing of Materials.

As requested, tests on physical properties were carried out for the Materials supplied by you, for the work of **'Construction of Covering Slab at SWD Patel Pillegowda layout, Near Durga Shree Apartment in Ward no. 10 (Doddabommasandra), Vidyaranyapura Sub Division.'**

Please find the enclosed Test Reports of the above.

**Thanking You,**
**For Civil Tech Labs**

CIVIL TECH LABS BANGALORE

**(BASAVARAJ K.)**
**Executive Director**

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore-97

ME-10

Jadhav
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# TEST REPORT

## GRADATION TEST ON COARSE AGGREGATES 20mm ↓ Graded

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Vidyaranyapura Sub Division, BBMP |
| **Name of Work** | Construction of Covering Slab at SWD Patel Pillegowda layout, Near Durga Shree Apartment in Ward no. 10 (Doddabommasandra), Vidyaranyapura Sub Division. |
| **Name of Agency** | Sri. S. E. Rajesh. |
| **Date of Testing** | 15/03/2016 |
| **Specific Gravity** | **2.62** |
| **Water Absorption** | **0.30%** |
| **Technical Reference** | IS : 2386(Part I)–1963 (Reaffirmed 2011), IS : 2386 ( Part III )–1963 (Reaffirmed 2011 ) |

| **IS Sieve Designation (mm)** | **Sieve Analysis (% Passing IS Sieve)** | **Grading Requirement as per IS:383-1970 (Reaffirmed 2011)** | **Remarks** |
|---|---|---|---|
| 40 | **100** | 100 | **Satisfies the requirement** |
| 20 | **97.9** | 95-100 | |
| 10 | **44.7** | 25-55 | |
| 4.75 | **7.5** | 0-10 | |

**Note:**

1. The results relate only to the items tested.
2. Report shall not be reproduced except in full, without the written approval of the lab.
3. Any correction invalidates this report.
4. The results are based on the test conducted on samples supplied by the customer.

Assistant Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

Lab Incharge
Civil Tech Labs

CIVIL TECH LABS BANGALORE

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# TEST REPORT

## GRADATION TEST ON COARSE AGGREGATES 40mm ↓ Graded

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Vidyaranyapura Sub Division, BBMP |
| **Name of Work** | Construction of Covering Slab at SWD Patel Pillegowda layout, Near Durga Shree Apartment in Ward no. 10 (Doddabommasandra), Vidyaranyapura Sub Division. |
| **Name of Agency** | Sri. S. E. Rajesh. |
| **Date of Testing** | 15/03/2016 |
| **Specific Gravity** | **2.67** |
| **Water Absorption** | **0.28%** |
| **Technical Reference** | IS : 2386(Part I)–1963 (Reaffirmed 2011), IS : 2386 ( Part III )–1963 (Reaffirmed 2011 ) |

| IS Sieve Designation (mm) | Sieve Analysis (% Passing IS Sieve) | Grading Requirement as per IS:383-1970 (Reaffirmed 2011) | Remarks |
|---|---|---|---|
| 80 | **100** | 100 | Satisfies the requirement |
| 40 | **98.4** | 95-100 | |
| 20 | **54.2** | 30-70 | |
| 10 | **24.6** | 10-35 | |
| 4.75 | **3.7** | 0-5 | |

**Note:**

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Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

Roopa.G
Lab Incharge
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## TEST REPORT

## GRADATION TEST ON FINE AGGREGATES

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Vidyaranyapura Sub Division, BBMP |
| **Name of Work** | Construction of Covering Slab at SWD Patel Pillegowda layout, Near Durga Shree Apartment in Ward no. 10 (Doddabommasandra), Vidyaranyapura Sub Division. |
| **Name of Agency** | Sri. S. E. Rajesh. |
| **Date of Testing** | 15/03/2016 |
| **Specific Gravity** | **2.56** |
| **Technical Reference** | IS : 2386(Part I)–1963 (Reaffirmed 2011), IS : 2386 ( Part III )–1963 (Reaffirmed 2011 ) |

| Sample | IS Sieve designation (mm) | Sieve Analysis (% Passing IS Sieve) | Grading Requirement as per IS:383-1970 (Reaffirmed 2011) | | | | Grading Zone | Remarks |
|---|---|---|---|---|---|---|---|---|
| | | | ZONE-I | ZONE-II | ZONE-III | ZONE-IV | | |
| River Sand | 10 | **100** | 100 | 100 | 100 | 100 | II | Satisfies the requirement |
| | 4.75 | **97.5** | 90-100 | 90-100 | 90-100 | 95-100 | | |
| | 2.36 | **86.5** | 60-95 | 75-100 | 85-100 | 95-100 | | |
| | 1.18 | **73.2** | 30-70 | 55-90 | 75-100 | 90-100 | | |
| | 0.6 | **46.8** | 15-34 | 35-59 | 60-79 | 80-100 | | |
| | 0.3 | **25.6** | 5-20 | 8-30 | 12-40 | 15-50 | | |
| | 0.15 | **8.1** | 0-10 | 0-10 | 0-10 | 0-15 | | |

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Assistant Executive Engineer
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## TEST REPORT

## TEST ON CEMENT

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Vidyaranyapura Sub Division, BBMP |
| **Name of Work** | Construction of Covering Slab at SWD Patel Pillegowda layout, Near Durga Shree Apartment in Ward no. 10 (Doddabommasandra), Vidyaranyapura Sub Division. |
| **Name of the Agency** | Sri. S. E. Rajesh. |
| **Date of Testing** | 15/03/2016 |

| **Tests** | **Test Method As Per IS & Apparatus** | | **Results** | | **Requirements As Per IS 8112:1989** | **Remarks** |
|---|---|---|---|---|---|---|
| | **IS Code** | **Method** | **Value** | **Unit** | | |
| Initial Setting Time | **IS-4031 (Part-5) 1988** | VICAT | 54 | min | Not Less Than 30 Minutes | Satisfies Requirement |
| Final Setting Time | **IS-4031 (Part-5) 1988** | VICAT | 485 | min | Not More Than 600 Minutes | Satisfies Requirement |
| Soundness | **IS-4031 (Part-3) 1988** | LE-CHATELIER | 4 | mm | Not More Than 10 mm | Satisfies Requirement |

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Assistant Executive Engineer
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## TEST REPORT

TESTS ON REINFORCEMENT STEEL BAR 12 mm

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Vidyaranyapura Sub Division, BBMP |
| **Name of Work** | Construction of Covering Slab at SWD Patel Pillegowda layout, Near Durga Shree Apartment in Ward no. 10 (Doddabommasandra), Vidyaranyapura Sub Division. |
| **Name of the Agency** | Sri. S. E. Rajesh. |
| **Date of Testing** | 15/03/2016. |
| **Grade and Brand of Steel** | Fe - 500. |

| Sl.No. | Description | Result | IS 1786-2008 Min. Requirements | Remarks |
|---|---|---|---|---|
| 1 | Measured Diameter mm | 12 | 12 | Satisfactory |
| 2 | Wt/m Length (Kg/m) | 0.889 | 0.888 | Satisfactory |
| 3 | Bend & RebendTest | Pass | Should not Crack or Fracture | Satisfactory |
| 4 | Elongation (%) | 15.8 | 12 | Satisfactory |
| 5 | Yield Stress(N/Sq.mm) | 513 | 500 | Satisfactory |
| 6 | U T S (N/Sq.mm) | 570 | 545 | Satisfactory |

**Note:**

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Lab Incharge
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## TEST REPORT

TESTS ON REINFORCEMENT STEEL BAR 16 mm

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Vidyaranyapura Sub Division, BBMP |
| **Name of Work** | Construction of Covering Slab at SWD Patel Pillegowda layout, Near Durga Shree Apartment in Ward no. 10 (Doddabommasandra), Vidyaranyapura Sub Division. |
| **Name of the Agency** | Sri. S. E. Rajesh. |
| **Date of testing** | 15/03/2016. |
| **Grade and Brand of Steel** | Fe - 500. |

| Sl.No. | Description | Result | IS 1786-2008 Min. Requirements | Remarks |
|---|---|---|---|---|
| 1 | Measured Diameter mm | 16 | 16 | Satisfactory |
| 2 | Wt/m Length (Kg/m) | 1.6 | 1.58 | Satisfactory |
| 3 | Bend & RebendTest | Pass | Should not Crack or Fracture | Satisfactory |
| 4 | Elongation (%) | 17.4 | 12 | Satisfactory |
| 5 | Yield Stress(N/Sq.mm) | 520 | 500 | Satisfactory |
| 6 | U T S (N/Sq.mm) | 578 | 545 | Satisfactory |

**Note:**

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2. Report shall not be reproduced except in full, without the written approval of the lab.
3. Any correction invalidates this report.
4. The results are based on the test conducted on samples supplied by the client.

Roopa.G

Lab Incharge
Civil Tech Labs

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T-2654


To,

Assistant Executive Engineer,
Vidyaranyapura Sub Division,
BBMP.

18th April 2016

Dear Sir,

**Sub: Construction of Covering Slab at SWD Patel Pillegowda layout, Near Durga Shree Apartment in Ward no. 10 (Doddabommasandra), Vidyaranyapura Sub Division.**
Testing of cubes – Reg.

As requested the 28th day Compressive Strength Test of Cubes was carried out for the above work for the samples supplied by you.

Please find the enclosed Test Reports of the above.

Thanking you,

**For Civil Tech Labs,**

**(BASAVARAJ K.)**
**Executive Director**

CIVIL TECH LABS BANGALORE

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

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## TEST REPORT

### COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Vidyaranyapura Sub Division, BBMP |
| **Name of Work** | Construction of Covering Slab at SWD Patel Pillegowda layout, Near Durga Shree Apartment in Ward no. 10 (Doddabommasandra), Vidyaranyapura Sub Division. |
| **Name of Agency** | Sri. S. E. Rajesh. |
| **Grade of Concrete** | M-20 |
| **No. of cubes tested** | 3 |
| **Technical Reference** | IS: 516-1959 (Reaffirmed 2013) |

| Sl. No. | ID | Dimension of specimen (mm) | Cross sectional area ($mm^2$) | Date of Casting | Date of Testing | Age at test (Days) | Weight (Kg) | Failure Load (KN) | Compressive Strength ($N/mm^2$) | Avg Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Sample-1 | 150.18 X 150.19 X 150.0 | 22556 | 21/03/2016 | 18/04/2016 | 28 | 8.17 | 470 | **20.89** | 21.19 |
| 2 | | 150.21 X 150.20 X 150.0 | 22562 | | | | 8.19 | 475 | **21.11** | |
| 3 | | 150.24 X 150.22 X 150.0 | 22569 | | | | 8.20 | 485 | **21.56** | |

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# TEST REPORT

## COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Vidyaranyapura Sub Division, BBMP |
| **Name of Work** | Construction of Covering Slab at SWD Patel Pillegowda layout, Near Durga Shree Apartment in Ward no. 10 (Doddabommasandra), Vidyaranyapura Sub Division. |
| **Name of Agency** | Sri. S. E. Rajesh. |
| **Grade of Concrete** | M-20 |
| **No. of cubes tested** | 3 |
| **Technical Reference** | IS: 516-1959 (Reaffirmed 2013) |

| Sl. No. | ID | Dimension of specimen (mm) | Cross sectional area ($mm^2$) | Date of Casting | Date of Testing | Age at test (Days) | Weight (Kg) | Failure Load (KN) | Compressive Strength ($N/mm^2$) | Avg Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Sample-2 | 150.21 X 150.24 X 150.0 | 22568 | 21/03/2016 | 18/04/2016 | 28 | 8.18 | 475 | **21.11** | **21.48** |
| 2 | | 150.22 X 150.19 X 150.0 | 22562 | | | | 8.20 | 485 | **21.56** | |
| 3 | | 150.18 X 150.23 X 150.0 | 22562 | | | | 8.21 | 490 | **21.78** | |

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## TEST REPORT

### COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Vidyaranyapura Sub Division, BBMP |
| **Name of Work** | Construction of Covering Slab at SWD Patel Pillegowda layout, Near Durga Shree Apartment in Ward no. 10 (Doddabommasandra), Vidyaranyapura Sub Division. |
| **Name of Agency** | Sri. S. E. Rajesh. |
| **Grade of Concrete** | M-20 |
| **No. of cubes tested** | 3 |
| **Technical Reference** | IS: 516-1959 (Reaffirmed 2013) |

| Sl. No. | ID | Dimension of specimen (mm) | Cross sectional area ($mm^2$) | Date of Casting | Date of Testing | Age at test (Days) | Weight (Kg) | Failure Load (KN) | Compressive Strength ($N/mm^2$) | Avg Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Sample-3 | 150.19 X 150.21 X 150.0 | 22560 | 21/03/2016 | 18/04/2016 | 28 | 8.20 | 485 | **21.56** | **21.78** |
| 2 | | 150.24 X 150.25 X 150.0 | 22574 | | | | 8.21 | 490 | **21.78** | |
| 3 | | 150.26 X 150.27 X 150.0 | 22580 | | | | 8.22 | 495 | **22.00** | |

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Assistant Executive Engineer
Vidyaranyapura
BBMP, Bangalore-97

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# TEST REPORT

## COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Vidyaranyapura Sub Division, BBMP |
| **Name of Work** | Construction of Covering Slab at SWD Patel Pillegowda layout, Near Durga Shree Apartment in Ward no. 10 (Doddabommasandra), Vidyaranyapura Sub Division. |
| **Name of Agency** | Sri. S. E. Rajesh. |
| **Grade of Concrete** | M-20 |
| **No. of cubes tested** | 3 |
| **Technical Reference** | IS: 516-1959 (Reaffirmed 2013) |

| Sl. No. | ID | Dimension of specimen (mm) | Cross sectional area ($mm^2$) | Date of Casting | Date of Testing | Age at test (Days) | Weight (Kg) | Failure Load (KN) | Compressive Strength ($N/mm^2$) | Avg Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Sample-4 | 150.17 X 150.20 X 150.0 | 22556 | 21/03/2016 | 18/04/2016 | 28 | 8.18 | 485 | **21.56** | **21.85** |
| 2 | | 150.22 X 150.23 X 150.0 | 22568 | | | | 8.19 | 490 | **21.78** | |
| 3 | | 150.25 X 150.27 X 150.0 | 22578 | | | | 8.20 | 500 | **22.22** | |

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# TEST REPORT

## COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Vidyaranyapura Sub Division, BBMP |
| **Name of Work** | Construction of Covering Slab at SWD Patel Pillegowda layout, Near Durga Shree Apartment in Ward no. 10 (Doddabommasandra), Vidyaranyapura Sub Division. |
| **Name of Agency** | Sri. S. E. Rajesh. |
| **Grade of Concrete** | M-20 |
| **No. of cubes tested** | 3 |
| **Technical Reference** | IS: 516-1959 (Reaffirmed 2013) |

| Sl. No. | ID | Dimension of specimen (mm) | Cross sectional area ($mm^2$) | Date of Casting | Date of Testing | Age at test (Days) | Weight (Kg) | Failure Load (KN) | Compressive Strength ($N/mm^2$) | Avg Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Sample-5 | 150.15 X 150.18 X 150.0 | 22550 | 21/03/2016 | 18/04/2016 | 28 | 8.17 | 480 | **21.33** | **21.70** |
| 2 | | 150.16 X 150.17 X 150.0 | 22550 | | | | 8.18 | 490 | **21.78** | |
| 3 | | 150.21 X 150.23 X 150.0 | 22566 | | | | 8.20 | 495 | **22.00** | |

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